



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,898	01/16/2004	Ram Mohan Thakur	KSP-1002US	7009

24923 7590 11/29/2005
PAUL S MADAN
MADAN, MOSSMAN & SRIRAM, PC
2603 AUGUSTA, SUITE 700
HOUSTON, TX 77057-1130

EXAMINER

SAMPLE, DAVID R

ART UNIT	PAPER NUMBER
----------	--------------

1755

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/758,898

Applicant(s)

THAKUR ET AL.

Examiner

David Sample

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Any rejections and/or objections, made in the previous Office Action, and not repeated below, are hereby withdrawn.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuhm et al. (US Patent No. 5,645,811).

Kuhm et al. discloses a method of making a zeolite in which a sodium aluminosilicate is allowed to crystallize for a time, sodium aluminate is added to the partially crystallized reaction mixture, and the resultant mixture is further crystallized. See Examples 5-8, col's 13-17.

The reference discloses that one of the reaction components (e.g., aluminate) may be made in stoichiometric excess. See col. 4, lines 63-67 and col. 14, lines 31-38. Implicit in this disclosure is replenishing "to make up for the aluminum deficiency arising in the sodium aluminosilicate reaction mixture during crystallization." In other words, the reference discloses replenishing to make up for the aluminum deficiency and adding additional aluminum so that the aluminum is in excess.

The recitations of claim 2 can be found in the reference at col. 20, lines 10-13.

The recitations of claims 3, 4, 10 and 11 can be found in the reference at, for example, col. 12, lines 53-55.

The recitations of claim 6 can be found in the reference at col. 12, lines 53-68.

Art Unit: 1755

As to claim 9, the reference discloses forming NaA which is the Na form of zeolite A.

See, e.g., col. 12 lines 53-55.

Claim Rejections - 35 USC § 103

Claims 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuhm et al. (US Patent No. 5,645,811) in view of Dwyer et al. (US Patent No. 4,818,509).

As noted above Kuhm et al. discloses a method of making a zeolite in which a silicate solution is mixed with an aluminate solution to form a gel, the gel is crystallized, further sodium aluminate is added during crystallization. The recitations of step (e) regarding depletion and enrichment appear to be present in the reference at col. 4, lines 46-68.

Kuhm et al. differs from the claims in two ways. First, Kuhm et al. fails to disclose the use of seeds in the initial reaction mixture. Second, Kuhm et al. fails to disclose washing the zeolite to a pH of less than 9.

As to the first difference, Dwyer et al. discloses that the addition of seeds to a reaction mixture are known to improve product quality and production rate. See the paragraph bridging col's 6 and 7 of Dwyer et al.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have mixed seeds with the gel of Kuhm et al. because the resultant process would result in improved product quality and production rate.

As to the second difference, it was well known to one of ordinary skill in the art, and Dwyer et al. discloses washing the resultant zeolite. See col. 8, lines 35-41 of Dwyer et al.

Art Unit: 1755

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have washed the zeolite of Kuhm et al. as suggested by Dwyer et al., and known to one of ordinary skill in the art because the resultant zeolite would be free of reactants.

Response to Arguments

Applicant's arguments filed September 20, 2005 have been fully considered but they are not persuasive.

Rejection Over Kuhm et al. (US Patent No. 5,645,811)

Applicants argue that the object of the present invention is different than the object of Kuhm et al. This argument is not deemed persuasive because the "object" of the invention is not considered in determining anticipation. The rejection is appropriate because the reference discloses each of the claimed recitations.

Applicants argue that Kuhm et al. discloses that the replenishment only affects particle size, and that therefore, the process of Kuhm et al. does not affect the yield of zeolite. This argument is not deemed persuasive. The Kuhm et al. process includes identical steps performed in an identical manner. Therefore, the resultant effects of the process must be identical.

Applicants assert that Kuhm et al. uses less than the stoichiometric amount of reactants in the starting reaction mixture whereas the claims require beginning with stoichiometric amounts. This argument is not deemed persuasive because the reference discloses beginning with stoichiometric amounts of components and subsequently replenishing the aluminate. See col. 4, lines 63-67, and col. 14, lines 31-38.

Art Unit: 1755

Applicants argue that Kuhm et al. does not add the aluminate based upon deficiency of aluminate. This is true, but the process inherently performs such an addition. Kuhm et al. adds aluminate in excess of the stoichiometric amount. When adding excess aluminate, Kuhm et al. inherently replaces the aluminate that was depleted and adds additional aluminate.

Applicants argue that Kuhm et al. discloses replenishing aluminate or silicate, and that adding silicate is outside the present invention. This argument is noted but not persuasive. The reference discloses anticipatory examples and discloses all of the recitations of claim 1. The rejection is under § 102. Alternate teachings, or a “teaching away” is relevant to an obviousness rejection, not a § 102 rejection.

Applicants argue that Kuhm et al. disclose forming zeolites A, P and faujasite and do not disclose the other species of zeolite that can be employed by the present invention. This is not deemed persuasive because Kuhm et al. discloses forming at least one of the claimed species. Such a fact is sufficient for anticipation. The possibility that the claimed process may form other zeolites is relevant to the possibility of unexpected results, but, unexpected results are not relevant to an anticipation rejection.

Rejection over Kuhm et al. in view of Dwyer et al.

Many of the arguments here are duplicative of the arguments made in the traversal of the rejection over Kuhm et al. by itself. These arguments are not deemed persuasive for the reasons stated above. The examiner will answer further arguments below.

Applicants argue that Kuhm et al. discloses an increased aluminum content in the final product when aluminate is replenished in excess of the stoichiometric amount, and that this

Art Unit: 1755

disclosure is counter to the present invention because it decreases the amount of the desired composition. This argument is not deemed persuasive. This argument conflates two issues: the composition of the reaction mixture and the composition of the final product. Although related, they do not typically exactly correspond. Moreover, one must assume that the object of the Kuhm et al. patent is to obtain the zeolite that is obtained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Sample whose telephone number is (571)272-1376. The examiner can normally be reached on Monday to Friday.

Art Unit: 1755

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (572)272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "David Sample", with a long horizontal flourish extending to the right.

David Sample
Primary Examiner
Art Unit 1755